

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/008,264C
Source: IFW16
Date Processed by STIC: 1/31/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/008,264C

CRF Edit Date: 2/3/06
Edited by: [Signature]

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

✓ Deleted: ✓ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

___ Other:



IFW16

RAW SEQUENCE LISTING

DATE: 02/03/2006

PATENT APPLICATION: US/10/008,264C

TIME: 12:53:58

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\02032006\J008264C.raw

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4 <110> APPLICANT: Glimcher, Laurie H.
5     Szabo, Susanne, J.
7 <120> TITLE OF INVENTION: T-BET COMPOSITIONS AND METHODS OF USE THEREOF
9 <130> FILE REFERENCE: HUI-040CP
11 <140> CURRENT APPLICATION NUMBER: US 10/008264C
12 <141> CURRENT FILING DATE: 2001-12-03
14 <150> PRIOR APPLICATION NUMBER: PCT/US00/15345
15 <151> PRIOR FILING DATE: 2000-06-01
17 <150> PRIOR APPLICATION NUMBER: US 60/137085
18 <151> PRIOR FILING DATE: 1999-06-02
20 <160> NUMBER OF SEQ ID NOS: 9
22 <170> SOFTWARE: PatentIn Ver. 2.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 1608
26 <212> TYPE: DNA
27 <213> ORGANISM: Homo sapiens
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (1)..(1605)
33 <400> SEQUENCE: 1
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36   1               5               10              15
38 ccg atg ccg ggg agc gac gag ggc cgg gcg cct ggc gcc gac ccg cag      96
39 Pro Met Pro Gly Ser Asp Glu Gly Arg Ala Pro Gly Ala Asp Pro Gln
40   20              25              30
42 cac cgc tac ttc tac ccg gag ccg ggc gcg cag gac gcg gac gag cgt     144
43 His Arg Tyr Phe Tyr Pro Glu Pro Gly Ala Gln Asp Ala Asp Glu Arg
44   35              40              45
46 cgc ggg ggc ggc agc ctg ggg tct ccc tac ccg ggg ggc gcc ttg gtg     192
47 Arg Gly Gly Gly Ser Leu Gly Ser Pro Tyr Pro Gly Gly Ala Leu Val
48   50              55              60
50 ccc gcc ccg ccg agc cgc ttc ctt gga gcc tac gcc tac ccg ccg cga     240
51 Pro Ala Pro Pro Ser Arg Phe Leu Gly Ala Tyr Ala Tyr Pro Pro Arg
52   65              70              75              80
54 ccc cag gcg gcc ggc ttc ccc ggc gcg ggc gag tcc ttc ccg ccg ccc     288
55 Pro Gln Ala Ala Gly Phe Pro Gly Ala Gly Glu Ser Phe Pro Pro Pro
56   85              90              95
58 gcg gac gcc gag ggc tac cag ccg ggc gag ggc tac gcc gcc ccg gac     336
59 Ala Asp Ala Glu Gly Tyr Gln Pro Gly Glu Gly Tyr Ala Ala Pro Asp
60   100             105             110
63 ccg cgc gcc ggg ctc tac ccg ggg ccg cgt gag gac tac gcg cta ccc     384
64 Pro Arg Ala Gly Leu Tyr Pro Gly Pro Arg Glu Asp Tyr Ala Leu Pro

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Input Set : A:\PTO.AMC.txt

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65	115	120	125	
67	gcg gga ctg gag gtg tcg ggg aaa ctg agg gtc gcg ctc aac aac cac	432		
68	Ala Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Asn Asn His			
69	130	135	140	
71	ctg ttg tgg tcc aag ttt aat cag cac cag aca gag atg atc atc acc	480		
72	Leu Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr			
73	145	150	155	160
75	aag cag gga cgg cgg atg ttc cca ttc ctg tca ttt act gtg gcc ggg	528		
76	Lys Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly			
77	165	170	175	
79	ctg gag ccc acc agc cac tac agg atg ttt gtg gac gtg gtc ttg gtg	576		
80	Leu Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val			
81	180	185	190	
83	gac cag cac cac tgg cgg tac cag agc ggc aag tgg gtg cag tgt gga	624		
84	Asp Gln His His Trp Arg Tyr Gln Ser Gly Lys Trp Val Gln Cys Gly			
85	195	200	205	
87	aag gcc gag ggc agc atg cca gga aac cgc ctg tac gtc cac ccg gac	672		
88	Lys Ala Glu Gly Ser Met Pro Gly Asn Arg Leu Tyr Val His Pro Asp			
89	210	215	220	
91	tcc ccc aac aca gga gcg cac tgg atg cgc cag gaa gtt tca ttt ggg	720		
92	Ser Pro Asn Thr Gly Ala His Trp Met Arg Gln Glu Val Ser Phe Gly			
93	225	230	235	240
95	aaa cta aag ctc aca aac aac aag ggg gcg tcc aac aat gtg acc cag	768		
96	Lys Leu Lys Leu Thr Asn Asn Lys Gly Ala Ser Asn Asn Val Thr Gln			
97	245	250	255	
99	atg att gtg ctc cag tcc ctc cat aag tac cag ccc cgg ctg cat atc	816		
100	Met Ile Val Leu Gln Ser Leu His Lys Tyr Gln Pro Arg Leu His Ile			
101	260	265	270	
103	gtt gag gtg aac gac gga gag cca gag gca gcc tgc aac gct tcc aac	864		
104	Val Glu Val Asn Asp Gly Glu Pro Glu Ala Ala Cys Asn Ala Ser Asn			
105	275	280	285	
107	acg cat atc ttt act ttc caa gaa acc cag ttc att gcc gtg act gcc	912		
108	Thr His Ile Phe Thr Phe Gln Glu Thr Gln Phe Ile Ala Val Thr Ala			
109	290	295	300	
111	tac cag aat gcc gag att act cag ctg aaa att gat aat aac ccc ttt	960		
112	Tyr Gln Asn Ala Glu Ile Thr Gln Leu Lys Ile Asp Asn Asn Pro Phe			
113	305	310	315	320
115	gcc aaa gga ttc cgg gag aac ttt gag tcc atg tac aca tct gtt gac	1008		
116	Ala Lys Gly Phe Arg Glu Asn Phe Glu Ser Met Tyr Thr Ser Val Asp			
117	325	330	335	
119	acc agc atc ccc tcc ccg cct gga ccc aac tgt caa ttc ctt ggg gga	1056		
120	Thr Ser Ile Pro Ser Pro Pro Gly Pro Asn Cys Gln Phe Leu Gly Gly			
121	340	345	350	
124	gat cac tac tct cct ctc cta ccc aac cag tat cct gtt ccc agc cgc	1104		
125	Asp His Tyr Ser Pro Leu Leu Pro Asn Gln Tyr Pro Val Pro Ser Arg			
126	355	360	365	
128	ttc tac ccc gac ctt cct ggc cag gcg aag gat gtg gtt ccc cag gct	1152		
129	Phe Tyr Pro Asp Leu Pro Gly Gln Ala Lys Asp Val Val Pro Gln Ala			
130	370	375	380	

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\02032006\J008264C.raw

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132 tac tgg ctg ggg gcc ccc cgg gac cac agc tat gag gct gag ttt cga 1200
133 Tyr Trp Leu Gly Ala Pro Arg Asp His Ser Tyr Glu Ala Glu Phe Arg
134 385 390 395 400
136 gca gtc agc atg aag cct gca ttc ttg ccc tct gcc cct ggg ccc acc 1248
137 Ala Val Ser Met Lys Pro Ala Phe Leu Pro Ser Ala Pro Gly Pro Thr
138 405 410 415
140 atg tcc tac tac cga ggc cag gag gtc ctg gca cct gga gct ggc tgg 1296
141 Met Ser Tyr Tyr Arg Gly Gln Glu Val Leu Ala Pro Gly Ala Gly Trp
142 420 425 430
144 cct gtg gca ccc cag tac cct ccc aag atg ggc ccg gcc agc tgg ttc 1344
145 Pro Val Ala Pro Gln Tyr Pro Pro Lys Met Gly Pro Ala Ser Trp Phe
146 435 440 445
148 cgc cct atg cgg act ctg ccc atg gaa ccc ggc cct gga ggc tca gag 1392
149 Arg Pro Met Arg Thr Leu Pro Met Glu Pro Gly Pro Gly Gly Ser Glu
150 450 455 460
152 gga cgg gga cca gag gac cag ggt ccc ccc ttg gtg tgg act gag att 1440
153 Gly Arg Gly Pro Glu Asp Gln Gly Pro Pro Leu Val Trp Thr Glu Ile
154 465 470 475 480
156 gcc ccc atc cgg ccg gaa tcc agt gat tca gga ctg ggc gaa gga gac 1488
157 Ala Pro Ile Arg Pro Glu Ser Ser Asp Ser Gly Leu Gly Glu Gly Asp
158 485 490 495
160 tct aag agg agg cgc gtg tcc ccc tat cct tcc agt ggt gac agc tcc 1536
161 Ser Lys Arg Arg Arg Val Ser Pro Tyr Pro Ser Ser Gly Asp Ser Ser
162 500 505 510
164 tcc cct gct ggg gcc cct tct cct ttt gat aag gaa gct gaa gga cag 1584
165 Ser Pro Ala Gly Ala Pro Ser Pro Phe Asp Lys Glu Ala Glu Gly Gln
166 515 520 525
168 ttt tat aac tat ttt ccc aac tga 1608
169 Phe Tyr Asn Tyr Phe Pro Asn
170 530 535
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174 <211> LENGTH: 535
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176 <213> ORGANISM: Homo sapiens
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182 Pro Met Pro Gly Ser Asp Glu Gly Arg Ala Pro Gly Ala Asp Pro Gln
183 20 25 30
185 His Arg Tyr Phe Tyr Pro Glu Pro Gly Ala Gln Asp Ala Asp Glu Arg
186 35 40 45
188 Arg Gly Gly Gly Ser Leu Gly Ser Pro Tyr Pro Gly Gly Ala Leu Val
189 50 55 60
191 Pro Ala Pro Pro Ser Arg Phe Leu Gly Ala Tyr Ala Tyr Pro Pro Arg
192 65 70 75 80
194 Pro Gln Ala Ala Gly Phe Pro Gly Ala Gly Glu Ser Phe Pro Pro Pro
195 85 90 95
197 Ala Asp Ala Glu Gly Tyr Gln Pro Gly Glu Gly Tyr Ala Ala Pro Asp
198 100 105 110

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DATE: 02/03/2006

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TIME: 12:53:58

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\02032006\J008264C.raw

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201      115      120      125
203 Ala Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Asn Asn His
204      130      135      140
206 Leu Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr
207 145      150      155      160
209 Lys Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly
210      165      170      175
212 Leu Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val
213      180      185      190
215 Asp Gln His His Trp Arg Tyr Gln Ser Gly Lys Trp Val Gln Cys Gly
216      195      200      205
218 Lys Ala Glu Gly Ser Met Pro Gly Asn Arg Leu Tyr Val His Pro Asp
219      210      215      220
221 Ser Pro Asn Thr Gly Ala His Trp Met Arg Gln Glu Val Ser Phe Gly
222 225      230      235      240
224 Lys Leu Lys Leu Thr Asn Asn Lys Gly Ala Ser Asn Asn Val Thr Gln
225      245      250      255
227 Met Ile Val Leu Gln Ser Leu His Lys Tyr Gln Pro Arg Leu His Ile
228      260      265      270
230 Val Glu Val Asn Asp Gly Glu Pro Glu Ala Ala Cys Asn Ala Ser Asn
231      275      280      285
233 Thr His Ile Phe Thr Phe Gln Glu Thr Gln Phe Ile Ala Val Thr Ala
234      290      295      300
236 Tyr Gln Asn Ala Glu Ile Thr Gln Leu Lys Ile Asp Asn Asn Pro Phe
237 305      310      315      320
239 Ala Lys Gly Phe Arg Glu Asn Phe Glu Ser Met Tyr Thr Ser Val Asp
240      325      330      335
242 Thr Ser Ile Pro Ser Pro Pro Gly Pro Asn Cys Gln Phe Leu Gly Gly
243      340      345      350
246 Asp His Tyr Ser Pro Leu Leu Pro Asn Gln Tyr Pro Val Pro Ser Arg
247      355      360      365
249 Phe Tyr Pro Asp Leu Pro Gly Gln Ala Lys Asp Val Val Pro Gln Ala
250      370      375      380
252 Tyr Trp Leu Gly Ala Pro Arg Asp His Ser Tyr Glu Ala Glu Phe Arg
253 385      390      395      400
255 Ala Val Ser Met Lys Pro Ala Phe Leu Pro Ser Ala Pro Gly Pro Thr
256      405      410      415
258 Met Ser Tyr Tyr Arg Gly Gln Glu Val Leu Ala Pro Gly Ala Gly Trp
259      420      425      430
261 Pro Val Ala Pro Gln Tyr Pro Pro Lys Met Gly Pro Ala Ser Trp Phe
262      435      440      445
264 Arg Pro Met Arg Thr Leu Pro Met Glu Pro Gly Pro Gly Gly Ser Glu
265      450      455      460
267 Gly Arg Gly Pro Glu Asp Gln Gly Pro Pro Leu Val Trp Thr Glu Ile
268 465      470      475      480
270 Ala Pro Ile Arg Pro Glu Ser Ser Asp Ser Gly Leu Gly Glu Gly Asp
271      485      490      495
273 Ser Lys Arg Arg Arg Val Ser Pro Tyr Pro Ser Ser Gly Asp Ser Ser

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RAW SEQUENCE LISTING

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DATE: 02/03/2006

TIME: 12:53:58

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\02032006\J008264C.raw

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276 Ser Pro Ala Gly Ala Pro Ser Pro Phe Asp Lys Glu Ala Glu Gly Gln
277          515          520          525
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280          530          535
283 <210> SEQ ID NO: 3
284 <211> LENGTH: 1593
285 <212> TYPE: DNA
286 <213> ORGANISM: Mus musculus
288 <220> FEATURE:
289 <221> NAME/KEY: CDS
290 <222> LOCATION: (1)..(1590)
292 <400> SEQUENCE: 3
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295 1 5 10 15
297 ccg atg ccg agt gac gag ggc cgg ggg ccc gga gcg gac caa cag cat 96
298 Pro Met Pro Ser Asp Glu Gly Arg Gly Pro Gly Ala Asp Gln Gln His
299 20 25 30
302 cgt ttc ttc tat ccc gag ccg ggc gca cag gac ccg acc gat cgc cgc 144
303 Arg Phe Phe Tyr Pro Glu Pro Gly Ala Gln Asp Pro Thr Asp Arg Arg
304 35 40 45
306 gca ggt agc agc ctg ggg acg ccc tac tct ggg ggc gcc ctg gtg cct 192
307 Ala Gly Ser Ser Leu Gly Thr Pro Tyr Ser Gly Gly Ala Leu Val Pro
308 50 55 60
310 gcc gcg ccg ggt cgc ttc ctt gga tcc ttc gcc tac ccg ccc cgg gct 240
311 Ala Ala Pro Gly Arg Phe Leu Gly Ser Phe Ala Tyr Pro Pro Arg Ala
312 65 70 75 80
314 cag gtg gct ggc ttt ccc ggg cct ggc gag ttc ttc ccg ccg ccc gcg 288
315 Gln Val Ala Gly Phe Pro Gly Pro Gly Glu Phe Phe Pro Pro Pro Ala
316 85 90 95
318 ggt gcg gag ggc tac ccg ccc gtg gat ggc tac cct gcc cct gac ccg 336
319 Gly Ala Glu Gly Tyr Pro Pro Val Asp Gly Tyr Pro Ala Pro Asp Pro
320 100 105 110
322 cgc gcg ggg ctc tac cca ggg ccg cgc gag gac tac gca ttg ccc gcg 384
323 Arg Ala Gly Leu Tyr Pro Gly Pro Arg Glu Asp Tyr Ala Leu Pro Ala
324 115 120 125
326 ggg ttg gag gtg tct ggg aag ctg aga gtc gcg ctc agc aac cac ctg 432
327 Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Ser Asn His Leu
328 130 135 140
330 ttg tgg tcc aag ttc aac cag cac cag aca gag atg atc atc act aag 480
331 Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr Lys
332 145 150 155 160
334 caa gga ccg cga atg ttc cca ttc ctg tcc ttc acc gtg gcc ggg ctg 528
335 Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly Leu
336 165 170 175
338 gag ccc aca agc cat tac agg atg ttt gtg gat gtg gtc ttg gtg gac 576
339 Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val Asp
340 180 185 190

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VERIFICATION SUMMARY

DATE: 02/03/2006

PATENT APPLICATION: **US/10/008,264C**

TIME: 12:53:59

Input Set : **A:\PTO.AMC.txt**

Output Set: **N:\CRF4\02032006\J008264C.raw**

**Raw Sequence Listing before editing
(for reference only)**



IFW16

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/008,264C

TIME: 10:59:35

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\01312006\J008264C.raw

4 <110> APPLICANT: Glimcher, Laurie H.
 5 Szabo, Susanne, J.
 7 <120> TITLE OF INVENTION: T-BET COMPOSITIONS AND METHODS OF USE THEREOF
 9 <130> FILE REFERENCE: HUI-040CP
 11 <140> CURRENT APPLICATION NUMBER: US 10/008264C
 12 <141> CURRENT FILING DATE: 2001-12-03
 14 <150> PRIOR APPLICATION NUMBER: PCT/US00/15345
 15 <151> PRIOR FILING DATE: 2000-06-01
 17 <150> PRIOR APPLICATION NUMBER: US 60/137085
 18 <151> PRIOR FILING DATE: 1999-06-02
 20 <160> NUMBER OF SEQ ID NOS: 9
 22 <170> SOFTWARE: PatentIn Ver. 2.0
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 1608
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Homo sapiens
 29 <220> FEATURE:
 30 <221> NAME/KEY: CDS
 31 <222> LOCATION: (1)..(1605)
 33 <400> SEQUENCE: 1
 34 atg ggc atc gtg gag ccg ggt tgc gga gac atg ctg acg ggc acc gag 48
 35 Met Gly Ile Val Glu Pro Gly Cys Gly Asp Met Leu Thr Gly Thr Glu
 36 1 5 10 15
 38 ccg atg ccg ggg agc gac gag ggc cgg gcg cct ggc gcc gac ccg cag 96
 39 Pro Met Pro Gly Ser Asp Glu Gly Arg Ala Pro Gly Ala Asp Pro Gln
 40 20 25 30
 42 cac cgc tac ttc tac ccg gag ccg ggc gcg cag gac gcg gac gag cgt 144
 43 His Arg Tyr Phe Tyr Pro Glu Pro Gly Ala Gln Asp Ala Asp Glu Arg
 44 35 40 45
 46 cgc ggg ggc ggc agc ctg ggg tct ccc tac ccg ggg ggc gcc ttg gtg 192
 47 Arg Gly Gly Gly Ser Leu Gly Ser Pro Tyr Pro Gly Gly Ala Leu Val
 48 50 55 60
 50 ccc gcc ccg ccg agc cgc ttc ctt gga gcc tac gcc tac ccg ccg cga 240
 51 Pro Ala Pro Pro Ser Arg Phe Leu Gly Ala Tyr Ala Tyr Pro Pro Arg
 52 65 70 75 80
 54 ccc cag gcg gcc ggc ttc ccc ggc gcg ggc gag tcc ttc ccg ccg ccc 288
 55 Pro Gln Ala Ala Gly Phe Pro Gly Ala Gly Glu Ser Phe Pro Pro Pro
 56 85 90 95
 58 gcg gac gcc gag ggc tac cag ccg ggc gag ggc tac gcc gcc ccg gac 336
 59 Ala Asp Ala Glu Gly Tyr Gln Pro Gly Glu Gly Tyr Ala Ala Pro Asp
 60 100 105 110
 63 ccg cgc gcc ggg ctc tac ccg ggg ccg cgt gag gac tac gcg cta ccc 384
 64 Pro Arg Ala Gly Leu Tyr Pro Gly Pro Arg Glu Asp Tyr Ala Leu Pro

p.6
 Does Not Comply
 Corrected Diskette Needed

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DATE: 01/31/2006

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TIME: 10:59:35

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\01312006\J008264C.raw

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65          115          120          125
67 gcg gga ctg gag gtg tcg ggg aaa ctg agg gtc gcg ctc aac aac cac 432
68 Ala Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Asn Asn His
69          130          135          140
71 ctg ttg tgg tcc aag ttt aat cag cac cag aca gag atg atc atc acc 480
72 Leu Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr
73 145          150          155          160
75 aag cag gga cgg cgg atg ttc cca ttc ctg tca ttt act gtg gcc ggg 528
76 Lys Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly
77          165          170          175
79 ctg gag ccc acc agc cac tac agg atg ttt gtg gac gtg gtc ttg gtg 576
80 Leu Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val
81          180          185          190
83 gac cag cac cac tgg cgg tac cag agc ggc aag tgg gtg cag tgt gga 624
84 Asp Gln His His Trp Arg Tyr Gln Ser Gly Lys Trp Val Gln Cys Gly
85          195          200          205
87 aag gcc gag ggc agc atg cca gga aac cgc ctg tac gtc cac ccg gac 672
88 Lys Ala Glu Gly Ser Met Pro Gly Asn Arg Leu Tyr Val His Pro Asp
89          210          215          220
91 tcc ccc aac aca gga gcg cac tgg atg cgc cag gaa gtt tca ttt ggg 720
92 Ser Pro Asn Thr Gly Ala His Trp Met Arg Gln Glu Val Ser Phe Gly
93 225          230          235          240
95 aaa cta aag ctc aca aac aac aag ggg gcg tcc aac aat gtg acc cag 768
96 Lys Leu Lys Leu Thr Asn Asn Lys Gly Ala Ser Asn Asn Val Thr Gln
97          245          250          255
99 atg att gtg ctc cag tcc ctc cat aag tac cag ccc cgg ctg cat atc 816
100 Met Ile Val Leu Gln Ser Leu His Lys Tyr Gln Pro Arg Leu His Ile
101          260          265          270
103 gtt gag gtg aac gac gga gag cca gag gca gcc tgc aac gct tcc aac 864
104 Val Glu Val Asn Asp Gly Glu Pro Glu Ala Ala Cys Asn Ala Ser Asn
105          275          280          285
107 acg cat atc ttt act ttc caa gaa acc cag ttc att gcc gtg act gcc 912
108 Thr His Ile Phe Thr Phe Gln Glu Thr Gln Phe Ile Ala Val Thr Ala
109          290          295          300
111 tac cag aat gcc gag att act cag ctg aaa att gat aat aac ccc ttt 960
112 Tyr Gln Asn Ala Glu Ile Thr Gln Leu Lys Ile Asp Asn Asn Pro Phe
113 305          310          315          320
115 gcc aaa gga ttc cgg gag aac ttt gag tcc atg tac aca tct gtt gac 1008
116 Ala Lys Gly Phe Arg Glu Asn Phe Glu Ser Met Tyr Thr Ser Val Asp
117          325          330          335
119 acc agc atc ccc tcc ccg cct gga ccc aac tgt caa ttc ctt ggg gga 1056
120 Thr Ser Ile Pro Ser Pro Pro Gly Pro Asn Cys Gln Phe Leu Gly Gly
121          340          345          350
124 gat cac tac tct cct ctc cta ccc aac cag tat cct gtt ccc agc cgc 1104
125 Asp His Tyr Ser Pro Leu Leu Pro Asn Gln Tyr Pro Val Pro Ser Arg
126          355          360          365
128 ttc tac ccc gac ctt cct ggc cag gcg aag gat gtg gtt ccc cag gct 1152
129 Phe Tyr Pro Asp Leu Pro Gly Gln Ala Lys Asp Val Val Pro Gln Ala
130          370          375          380

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DATE: 01/31/2006

PATENT APPLICATION: US/10/008,264C

TIME: 10:59:35

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\01312006\J008264C.raw

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132 tac tgg ctg ggg gcc ccc cgg gac cac agc tat gag gct gag ttt cga 1200
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134 385 390 395 400
136 gca gtc agc atg aag cct gca ttc ttg ccc tct gcc cct ggg ccc acc 1248
137 Ala Val Ser Met Lys Pro Ala Phe Leu Pro Ser Ala Pro Gly Pro Thr
138 405 410 415
140 atg tcc tac tac cga ggc cag gag gtc ctg gca cct gga gct ggc tgg 1296
141 Met Ser Tyr Tyr Arg Gly Gln Glu Val Leu Ala Pro Gly Ala Gly Trp
142 420 425 430
144 cct gtg gca ccc cag tac cct ccc aag atg ggc ccg gcc agc tgg ttc 1344
145 Pro Val Ala Pro Gln Tyr Pro Pro Lys Met Gly Pro Ala Ser Trp Phe
146 435 440 445
148 cgc cct atg cgg act ctg ccc atg gaa ccc ggc cct gga ggc tca gag 1392
149 Arg Pro Met Arg Thr Leu Pro Met Glu Pro Gly Pro Gly Gly Ser Glu
150 450 455 460
152 gga cgg gga cca gag gac cag ggt ccc ccc ttg gtg tgg act gag att 1440
153 Gly Arg Gly Pro Glu Asp Gln Gly Pro Pro Leu Val Trp Thr Glu Ile
154 465 470 475 480
156 gcc ccc atc cgg ccg gaa tcc agt gat tca gga ctg ggc gaa gga gac 1488
157 Ala Pro Ile Arg Pro Glu Ser Ser Asp Ser Gly Leu Gly Glu Gly Asp
158 485 490 495
160 tct aag agg agg cgc gtg tcc ccc tat cct tcc agt ggt gac agc tcc 1536
161 Ser Lys Arg Arg Val Ser Pro Tyr Pro Ser Ser Gly Asp Ser Ser
162 500 505 510
164 tcc cct gct ggg gcc cct tct cct ttt gat aag gaa gct gaa gga cag 1584
165 Ser Pro Ala Gly Ala Pro Ser Pro Phe Asp Lys Glu Ala Glu Gly Gln
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169 Phe Tyr Asn Tyr Phe Pro Asn
170 530 535
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175 <212> TYPE: PRT
176 <213> ORGANISM: Homo sapiens
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182 Pro Met Pro Gly Ser Asp Glu Gly Arg Ala Pro Gly Ala Asp Pro Gln
183 20 25 30
185 His Arg Tyr Phe Tyr Pro Glu Pro Gly Ala Gln Asp Ala Asp Glu Arg
186 35 40 45
188 Arg Gly Gly Gly Ser Leu Gly Ser Pro Tyr Pro Gly Gly Ala Leu Val
189 50 55 60
191 Pro Ala Pro Pro Ser Arg Phe Leu Gly Ala Tyr Ala Tyr Pro Pro Arg
192 65 70 75 80
194 Pro Gln Ala Ala Gly Phe Pro Gly Ala Gly Glu Ser Phe Pro Pro Pro
195 85 90 95
197 Ala Asp Ala Glu Gly Tyr Gln Pro Gly Glu Gly Tyr Ala Ala Pro Asp
198 100 105 110

```

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/008,264C

TIME: 10:59:35

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\01312006\J008264C.raw

```

200 Pro Arg Ala Gly Leu Tyr Pro Gly Pro Arg Glu Asp Tyr Ala Leu Pro
201          115          120          125
203 Ala Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Asn Asn His
204          130          135          140
206 Leu Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr
207 145          150          155          160
209 Lys Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly
210          165          170          175
212 Leu Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val
213          180          185          190
215 Asp Gln His His Trp Arg Tyr Gln Ser Gly Lys Trp Val Gln Cys Gly
216          195          200          205
218 Lys Ala Glu Gly Ser Met Pro Gly Asn Arg Leu Tyr Val His Pro Asp
219          210          215          220
221 Ser Pro Asn Thr Gly Ala His Trp Met Arg Gln Glu Val Ser Phe Gly
222 225          230          235          240
224 Lys Leu Lys Leu Thr Asn Asn Lys Gly Ala Ser Asn Asn Val Thr Gln
225          245          250          255
227 Met Ile Val Leu Gln Ser Leu His Lys Tyr Gln Pro Arg Leu His Ile
228          260          265          270
230 Val Glu Val Asn Asp Gly Glu Pro Glu Ala Ala Cys Asn Ala Ser Asn
231          275          280          285
233 Thr His Ile Phe Thr Phe Gln Glu Thr Gln Phe Ile Ala Val Thr Ala
234          290          295          300
236 Tyr Gln Asn Ala Glu Ile Thr Gln Leu Lys Ile Asp Asn Asn Pro Phe
237 305          310          315          320
239 Ala Lys Gly Phe Arg Glu Asn Phe Glu Ser Met Tyr Thr Ser Val Asp
240          325          330          335
242 Thr Ser Ile Pro Ser Pro Pro Gly Pro Asn Cys Gln Phe Leu Gly Gly
243          340          345          350
246 Asp His Tyr Ser Pro Leu Leu Pro Asn Gln Tyr Pro Val Pro Ser Arg
247          355          360          365
249 Phe Tyr Pro Asp Leu Pro Gly Gln Ala Lys Asp Val Val Pro Gln Ala
250          370          375          380
252 Tyr Trp Leu Gly Ala Pro Arg Asp His Ser Tyr Glu Ala Glu Phe Arg
253 385          390          395          400
255 Ala Val Ser Met Lys Pro Ala Phe Leu Pro Ser Ala Pro Gly Pro Thr
256          405          410          415
258 Met Ser Tyr Tyr Arg Gly Gln Glu Val Leu Ala Pro Gly Ala Gly Trp
259          420          425          430
261 Pro Val Ala Pro Gln Tyr Pro Pro Lys Met Gly Pro Ala Ser Trp Phe
262          435          440          445
264 Arg Pro Met Arg Thr Leu Pro Met Glu Pro Gly Pro Gly Gly Ser Glu
265          450          455          460
267 Gly Arg Gly Pro Glu Asp Gln Gly Pro Pro Leu Val Trp Thr Glu Ile
268 465          470          475          480
270 Ala Pro Ile Arg Pro Glu Ser Ser Asp Ser Gly Leu Gly Glu Gly Asp
271          485          490          495
273 Ser Lys Arg Arg Arg Val Ser Pro Tyr Pro Ser Ser Gly Asp Ser Ser

```

RAW SEQUENCE LISTING

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```

274          500          505          510
276 Ser Pro Ala Gly Ala Pro Ser Pro Phe Asp Lys Glu Ala Glu Gly Gln
277          515          520          525
279 Phe Tyr Asn Tyr Phe Pro Asn
280          530          535
283 <210> SEQ ID NO: 3
284 <211> LENGTH: 1593
285 <212> TYPE: DNA
286 <213> ORGANISM: Mus musculus
288 <220> FEATURE:
289 <221> NAME/KEY: CDS
290 <222> LOCATION: (1)..(1590)
292 <400> SEQUENCE: 3
293 atg ggc atc gtg gag ccg ggc tgc gga gac atg ctg acc ggc acc gag 48
294 Met Gly Ile Val Glu Pro Gly Cys Gly Asp Met Leu Thr Gly Thr Glu
295 1 5 10 15
297 ccg atg ccg agt gac gag ggc cgg ggg ccc gga gcg gac caa cag cat 96
298 Pro Met Pro Ser Asp Glu Gly Arg Gly Pro Gly Ala Asp Gln Gln His
299 20 25 30
302 cgt ttc ttc tat ccc gag ccg ggc gca cag gac ccg acc gat cgc cgc 144
303 Arg Phe Phe Tyr Pro Glu Pro Gly Ala Gln Asp Pro Thr Asp Arg Arg
304 35 40 45
306 gca ggt agc agc ctg ggg acg ccc tac tct ggg ggc gcc ctg gtg cct 192
307 Ala Gly Ser Ser Leu Gly Thr Pro Tyr Ser Gly Gly Ala Leu Val Pro
308 50 55 60
310 gcc gcg ccg ggt cgc ttc ctt gga tcc ttc gcc tac ccg ccc cgg gct 240
311 Ala Ala Pro Gly Arg Phe Leu Gly Ser Phe Ala Tyr Pro Pro Arg Ala
312 65 70 75 80
314 cag gtg gct ggc ttt ccc ggg cct ggc gag ttc ttc ccg ccg ccc gcg 288
315 Gln Val Ala Gly Phe Pro Gly Pro Gly Glu Phe Phe Pro Pro Pro Ala
316 85 90 95
318 ggt gcg gag ggc tac ccg ccc gtg gat ggc tac cct gcc cct gac ccg 336
319 Gly Ala Glu Gly Tyr Pro Pro Val Asp Gly Tyr Pro Ala Pro Asp Pro
320 100 105 110
322 cgc gcg ggg ctc tac cca ggg ccg cgc gag gac tac gca ttg ccc gcg 384
323 Arg Ala Gly Leu Tyr Pro Gly Pro Arg Glu Asp Tyr Ala Leu Pro Ala
324 115 120 125
326 ggg ttg gag gtg tct ggg aag ctg aga gtc gcg ctc agc aac cac ctg 432
327 Gly Leu Glu Val Ser Gly Lys Leu Arg Val Ala Leu Ser Asn His Leu
328 130 135 140
330 ttg tgg tcc aag ttc aac cag cac cag aca gag atg atc atc act aag 480
331 Leu Trp Ser Lys Phe Asn Gln His Gln Thr Glu Met Ile Ile Thr Lys
332 145 150 155 160
334 caa gga ccg cga atg ttc cca ttc ctg tcc ttc acc gtg gcc ggg ctg 528
335 Gln Gly Arg Arg Met Phe Pro Phe Leu Ser Phe Thr Val Ala Gly Leu
336 165 170 175
338 gag ccc aca agc cat tac agg atg ttt gtg gat gtg gtc ttg gtg gac 576
339 Glu Pro Thr Ser His Tyr Arg Met Phe Val Asp Val Val Leu Val Asp
340 180 185 190

```

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<400> 9

aaactgctgt ctaaactgg gcta

24

Attorney Docket No.: HUI-040CP

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/008,264C

DATE: 01/31/2006

TIME: 10:59:36

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\01312006\J008264C.raw

L:600 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4

L:605 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:9